

ON TWO SPECIES OF GALL-MIDGE OF
GENUS *SCHIZOMYIA*
(DIPTERA, CECIDOMYIDAE)*

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ONE PLATE

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Schizomyia sasaki (Monzen)

Parasphondylia sasaki, Monzen in: Kontyû, vol. 11, p. 191, 1937.

Schizomyia ilexicola, Shinji in: The insect world, vol. XLII, no. 8, p. 239, 1938.

Male: Body ground colour yellow, with reddish tint which disappears in alcoholic specimens.

Head small, yellow, with brown bristles on the occipital region. Eyes black, confluent.

Antenna pale brownish-yellow, extending to the second or third abdominal segment; 14-segmented, proportional length of the segments of the antennae as follows: I:II:III:IV:V:VI:VII:VIII:IX:X:XI:XII:XIII:XIV = 20:14:35:32:30:30:30:30:30:26:24:15:10. I conical, brownish-yellow, with two setae in the basal and apical portions; II roundish, of the same colour as I, nearly as long as broad, six or seven brown setae in the basal portion; III cylindrical or somewhat elliptic, pale brownish-yellow, covered with almost twenty setae and numerous brown minute scales, length: maximum width = 30:8, circumfili yellowish brown, well developed, whirls around the segments; IV—XII nearly the same as III, XIII short, XIV roundish, apex somewhat pointed. Mouth parts weak, pale brownish yellow, Maxillar palpi 4-segmented, proportional length of the segments of the palpi as follows: I:II:III:IV = 12:15:24:26; covered with some brown setae.

Thorax yellowish-brown, dorsum dusky-brown, sides yellow, covered with some brown hairs; scutellum well developed.

Wings semihyaline, slightly brownish, covered with numerous brown minute hairs. Veins brown.

Legs slender, yellow, covered with numerous brown scales; coxae

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with some brown hairs; spurs lacking; claws simple, brown.

Abdomen yellow, with brown transverse band on each dorsum of the segments, narrowed caudad, the last segment cylindrical.

Genitalia dusky-brown, basal clasp segments wide, distal clasp segments dusky, length about twice the width, dorsal lamella short, ventral lamella short and wide, lateral ungules distinct, style not longer than the lamella.

Measurements: Length of the body ca. 1.8 mm. Length of the antennae ca. 1.0 mm. Length of the fore-wing ca. 1.7 mm.

Female: Body paler than in male, antennae 14-segmented, III—XII lack the circumfili, proportional length of the segments almost same as in male. Abdomen wider than in male, ovipositor long, articulated, yellow.

Other characters nearly same as in male.

Measurements: Length of the body ca. 1.8 mm. Length of the antennae ca. 1.0 mm. Length of the fore-wing ca. 1.8 mm. Length of the ovipositor ca. 0.4 mm.

Larva: Length 3 mm, orange-yellow, spindle-shaped, somewhat flat. Breast-bone brown, bidentate. Dorsal and lateral papillae distinct.

Pupa: Length 3 mm, yellow. Antennal case extending nearly to the bases of the abdomen. Wing pads extending to the second abdominal segment. Leg cases extending almost to the fifth abdominal segment.

Host plant: *Ilex crenata* var. *typica* (Inutuge).

Gall: Globular swelling and enlargement of the bud. Colour green, sometimes with purplish tint. Diameter 8–20 mm. Polythalamous, two to five larvae in each elongate larval chamber.

The midge appears from May to June (my specimen was collected on May 1, 1938), probably once a year.

Hab. Very common in Kyoto.

This species was described first by Monzen as *Parasphondylia sasaki* as belonging to the genus known from East Africa. It seems to me that the midge belongs to the genus *Schizomyia* because of the following characters:

1. Palpi 4-segmented,
2. Antennal segments with anastomosing circumfili in male,
3. Ovipositor articulated,
4. Larval breast-bone bidentate.

Synonym. *Schizomyia ilexicola* Shinji.

Schizomyia soyogo sp. nov.

This midge resembles *S. sasakii*. The gall is formed on *Ilex pedunculosa* (Soyogo).

Male: Body rather small, ground colour yellow, with reddish tint in living specimens, which disappears when kept in alcohol.

Head small, yellow. Eyes black and confluent. Occipital region is covered with some brown hairs.

Antennae extending to the third abdominal segment; 14-segmented, proportional length of the segments of the antennae as follows: I:II:III:IV:V:VI:VII:VIII:IX:X:XII:XIII:XIV=20:14:42:38:35:34:32:30:30:25:20:14:10. I conical, length: maximum diameter=20:14; II roundish, almost as long as broad; III yellowish-brown, setae brown, apical setae longer than in *S. sasakii*, circumfili well developed, yellowish-brown. IV—XII almost the same as III, XIII short, XIV roundish. Length: maximum diameter in III=42:10, in V=35:10.

Mouth parts weak, dusky-yellow, maxillary palpi 4-segmented, ratio as follows: I:II:III:IV=10:15:26:25.

Thorax well developed, dorsum dusky, sides yellow. Wings semi-hyaline, slightly dusky, covered with numerous brown minute hairs, veins brown. Balancer yellow.

Legs slender, yellow, covered with many brown scales; spurs lacking; claws simple, brown.

Abdomen yellow, with a brown transverse band on each dorsum, narrowed caudad, the last segment cylindrical, yellow.

Genitalia brown, basal clasp segment wide and long, with length almost twice width, distal clasp segment short, dusky, dorsal lamella short and toothed, ventral lamella short, pale brownish-yellow, lateral ungules distinct, style longer than the lamella.

Measurements: Length of the body ca. 1.8 mm. Length of the antennae ca. 1.2 mm. Length of the fore-wing ca. 1.8 mm.

Female: Larger than male. Colour paler.

Antennae 14-segmented, III—XII segments lack anastomosing circumfili, proportional length of the segments almost same as in male.

Abdomen wider; ovipositor long, articulated, yellow and hairy.

Other characters same as in male.

Measurements: Length of the body ca. 2.0 mm. Length of the antennae ca. 1.2 mm. Length of the fore-wing ca. 20 mm. Length of the ovipositor ca. 0.5 mm.

Holotype. 1 ♂, May, 9, 1938. Kwazan, Higasiyama, Kyoto.

Type loc. Very common in Kyoto.

Larva: Orange-yellow, cylindrical, somewhat spindle-shaped, flat. Breast bone brown, bidented; the shape of the apex of the breast bone is different from that of *S. sasakii*.

Dorsal and lateral papillae distinct.

Length ca. 3 mm.

Pupa: Length 3 mm, yellow. Characters almost the same as in *S. sasakii* except the antennal case being longer.

Host plant: *Ilex pedunculosa* (Soyogo).

Gall: Globular or irregular and potato-like. Colour green turning to brown. Succulent; swelling and enlargement of the bud. Size, diameter 10–20 mm. Polythalamous. Two to five larvae found in each larval chamber.

Found all year round. The midge appears on May to June.

Remarks: The present species resembles somewhat the other *Ilex*-midge, *Schizomyia sasakii*, but it can be distinguished from the latter by a number of characteristics shown in the above description, especially in the antennae, male genitalia and in the breast bone of the larva.

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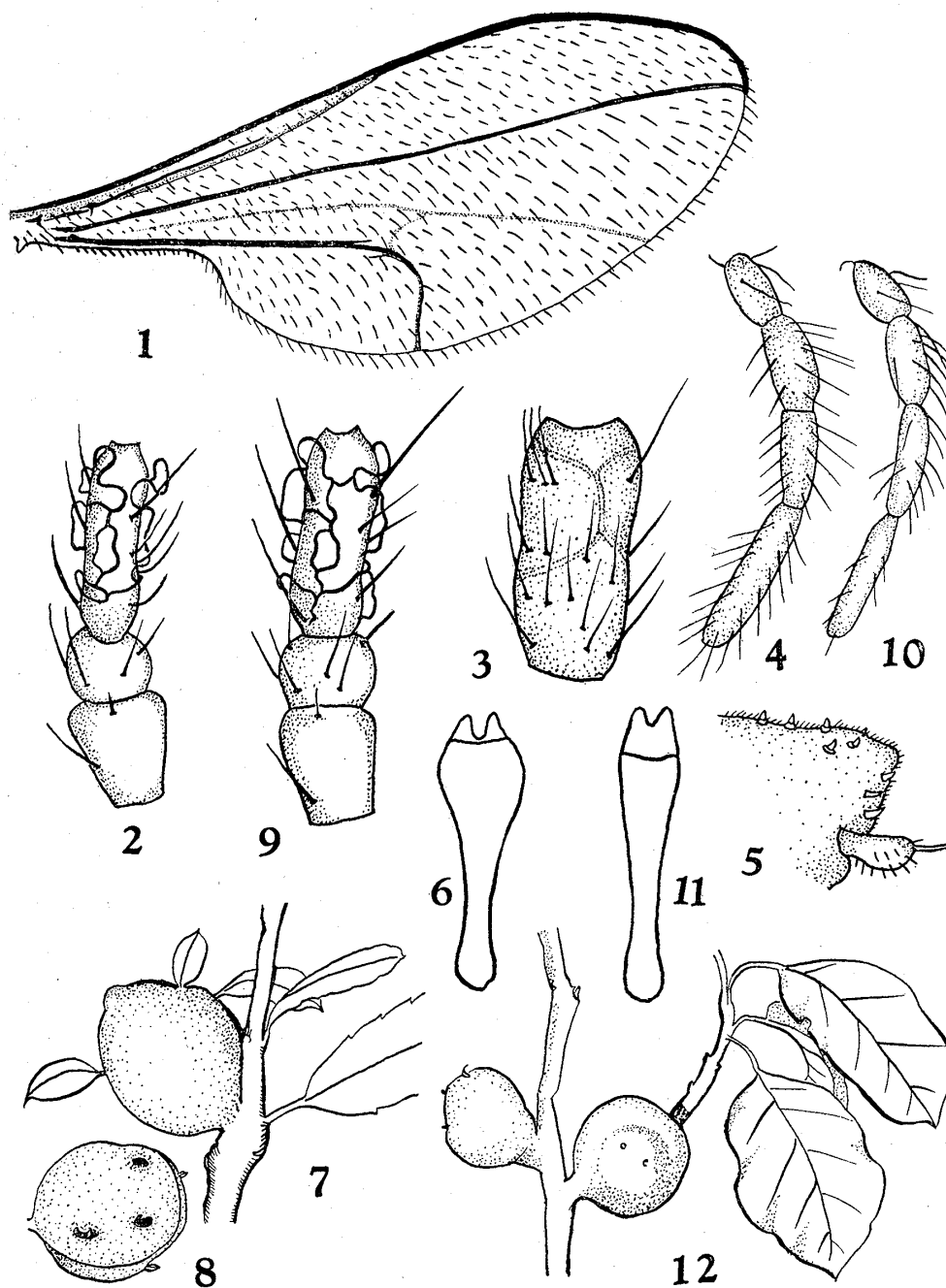
EXPLANATION OF PLATE 11

Figs. 1–8. *Schizomyia sasakii* (Monzen).

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| Fig. 1. Right fore wing. | Fig. 2. Antennal segments I–III, male. |
| Fig. 3. Antennal segment III, female. | Fig. 4. Maxillary palp, male. |
| Fig. 5. Apex of ovipositor. | Fig. 6. Breast bone of larva. |
| Fig. 7. Gall. | Fig. 8. Gall, longitudinal section. |

Figs. 9–12. *Schizomyia soyogo* sp. nov.

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| Fig. 9. Antennal segments I–III, male. | Fig. 10. Maxillary palp, male. |
| Fig. 11. Breast bone of larva. | Fig. 12. Gall. |



T. KIKUTI: GALL-MIDGE OF GENUS *SCHIZOMYIA*